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Published in:
Sociology of Health and Illness

DOI:
[10.1111/1467-9566.12504](https://doi.org/10.1111/1467-9566.12504)

Publication date:
2017

Document version
Peer reviewed version

Citation for published version (APA):
Hillersdal, L., Christensen, B. J., & Holm, L. (2017). Changing tastes: learning hunger and fullness after gastric bypass surgery . *Sociology of Health and Illness*, 39(3), 474-487. <https://doi.org/10.1111/1467-9566.12504>

Changing Tastes: Learning hunger and fullness after gastric bypass surgery

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Abstract

Gastric bypass surgery is a specific medical technology that alters the body in ways that force the patient to fundamentally change his or her eating habits. When patients enrol for surgery, they enter a learning process¹, encountering new and at times contested ways of sensing their bodies, tasting, and experiencing hunger and fullness. In this paper, we explore how patients begin to eat again after gastric bypass surgery. The empirical data used here are drawn from a Danish fieldwork study of persons undergoing obesity surgery.

The material presented shows how the patients used instructions on how to eat. We explore the ways in which diverse new experiences and practices of hunger and fullness are part of the process of undergoing surgery for severe obesity. New sensory experiences lead to uncertainty; as a result, patients practice what we term mimetic eating, which reflects a ‘sensory displacement’ and hence a rupture in the person’s sense of self and social relations. We suggest that eating should be conceptualised as a practice that extends beyond the boundaries of our bodies and into diverse realms of relations and practices, and that changing the way we eat also changes the fundamentally embodied experience of who we are.

Keywords: [Obesity, eating, senses, gastric bypass surgery]

Introduction

A gastric bypass is a specific medical technology that alters the body in ways that radically change both how a person eats and how hunger and fullness are experienced. After surgery, the person's stomach is reduced to one-tenth of its original size, and the first part of the intestine is bypassed (Sjöström *et al.* 2012). Because of these physical changes, patients alter their eating practices in several ways. That is to say, the surgical transformation of stomach size and intestinal length, together with changes in food absorption, result in new sensations, and hence feelings, related to eating; these in turn lead to changes in eating practices. Patients are advised to eat small meals up to six times a day and told to chew their food thoroughly. Some find they have to learn to eat all over again. The empirical focus of this article is on the processes involved in the resumption of eating after gastric bypass surgery. In the article, we analyse the practices and meanings attached to food and eating in the transition from before to after obesity surgery and explore the way eating shifts from a habitual routine to a distinct, conscientious engagement in relation to an altered body and new sensory experiences. 'Eating again' is understood here as the constant and minute adjustments made by the eater in response to the requirements of the body, informed by nutritional expertise embodied by dieticians and recommended meal plans on the one hand, and the personal, moral and social dimensions of the mundane practices of preparing, serving and consuming foods on the other. Gastric bypass is considered an effective treatment for severe obesity by physicians and surgeons (O'Brian 2015) but the subjective experience of the changes it produces and their long-term impact are not well researched (Throsby 2009, Natvik 2014). In the transition from before to after surgery, the existing role of eating is challenged, and eating acquires a new role. The experience of uncertainty in patients' lives becomes central to the way they relate to food and eating. We explore ways in which our eating seems to coalesce around experiences of personal integrity – experiences

that extend beyond our bodies and comprise numerous social and material relations – by asking how patients relate to their bodies, to food and to eating during both bodily and dietary change.

Lived experience of eating, dietary change and the body

The fields of anthropology and sociology have a long history of engaging with social and cultural aspects of food and eating (for extensive reviews, see: Mennel *et al.* 1992, Beardsworth and Keil 1997, Mintz and Du Bois 2002), but less scholarship has been devoted to sensory aspects of eating and the lived experience of the eating body. When incorporating sensory experience into the analysis of eating, the vast literature of the anthropology or sociology of the senses potentially opens up. But whereas most of this literature has dealt with comparative studies of ‘sensory cultures’ (Classen 1993, Howes 1991, 2003, Korsmeyer 2005), few have focused on the interconnectedness of food and the eater, as exemplified by the exploration of sensory practices (notable exceptions are Seremetakis 1996, Nichter 2008, Sutton 2001, 2010). In Greek anthropologist C. Nadia Seremetakis’s seminal work on sensory memory, *The Senses Still* (1996), she is interested in how memory and a sense of one’s self is tied to the sensory experience of particular material artefacts such as food. In this way everyday experience, and thus the historicity of the self, are linked to our sensory memory of the concrete, tangible qualities of food and eating. One example she uses is the memory of tasting a particular Greek peach (rodhákino), which is no longer available. Seremetakis thus links the disappearance of sensory practices of eating particular foods or of handling other material artefacts to changes in our life worlds (1996: 8). A similar question arises in the case of gastric bypass patients, for what exactly happens when one can no longer experience hunger, eating, or feeling full in the ways one is accustomed to? With Seremetakis, we propose an understanding of eating as an embodied sensory practice tied to the

wider material, symbolic and social formation of selves. As we shall show in the case of gastric bypass patients, disconnection from these practices can result in experiences of “sensory displacement” (1996: 3) from one’s self but also from others, leading in turn to experiences of social displacement. Seremetakis’s work developed alongside early theories of embodied experience in the social sciences (see e.g. Scheper-Hughes and Lock 1987, Leder 1990, Csodas 1990). Perspectives on the body that arise from these phenomenologically-inspired studies perceive the body as the prime locus of experience. What we find particularly interesting within this strand of phenomenology is the dynamic definition of embodied experience, which conceptualises the body as a subject/object and which highlights the tension between having and being a body. The lived body denotes a body which is somehow always being made; it is unfinished and therefore always in an intimate relationship with the world in which it finds itself (Csodas 1990). According to Leder (1990), our bodies are not acknowledgeable to us as objects in the world, because we live and act through them (ibid: 25). He terms this the ‘disappearing body’. This changes however, when, like the gastric bypass patients, we experience change or pain. The body is no longer ‘hidden’, but becomes an object in itself, demanding attention. The body’s status changes from ‘disappearing’ to ‘dys-appearing’ and hence “it can come to appear ‘Other’ and opposed to the self” (ibid: 70). The paradoxical way the ambiguous body becomes both an object of measurement and control in dietetic counselling and a subject (but ‘someone not quite me’) will be used as a lens here, guiding the analysis of the patients’ changing eating practices. Eating and the body are inherently social. Hence the work of Judith Farquhar in her book *Appetites – Food and Sex in Post-Socialist China* (2002) offers a point of entry into combining a focus on lived experience with a focus on the political, cultural and historical contingency of embodiment. Farquhar links eating, materiality and ideology by pointing to the often-naturalised but diverse embodied and social practices that make up the practices of eating, and calls for further investigation of what she terms

‘the political phenomenology of eating’ (ibid: 28,47). Using Farquhar’s insights, we suggest that change (in body, diet and self) should be viewed as an interrelation between politics and eating that necessarily involves negotiation of what constitutes bodies, hunger and fullness in lived everyday experience, and that experiences of diverse modes of embodiment are part of the difficulties patients have when they adopt a new diet.

Weight-loss surgery

Weight-loss surgery has gained popularity in recent years as an alternative or supplement to weight-loss diets. There are several different weight-loss surgeries, but a common bariatric procedure is the so-called ‘Roux-en-y’ gastric bypass. The procedure affects eating practices immediately because of the physiological changes it makes to the digestive tract (Moshiri *et al.* 2013). By creating a small gastric pouch, the procedure ensures that the new stomach can hold only a small amount of food, approximately 4 oz at most. In addition, the food that is eaten is not absorbed the way it was prior to surgery, since part of the small intestine is bypassed, leading to fewer calories being absorbed. Central here is the fact that regulation of eating is achieved by a radical change of the physical body rather than by interventions directed at dietary habits and practices. In Denmark, the operation is offered mainly on the basis of a person’s BMI¹. Candidates are further required to lose 8% of their body weight before surgery.² At the time of fieldwork (2010–2012), a person without any health problems other than obesity could be referred for surgery with a BMI of 40. For people with related health problems, the minimum BMI level was 35. The majority of health care services in Denmark are free of charge and based on the welfare state principle of equal access for all citizens. The cost of obesity surgery is high, and until recently Denmark had the world’s highest number of operations per capita (550 per million citizens)³. However, Denmark has a relatively low

obesity rate, at 10–15% of the population. Obesity is socially differentiated in Denmark, as it is throughout the world.

Following surgery, patients can expect to lose approximately 60% of their overweight, which can lead to better overall health. Weight has come to dominate health concerns, and overweight has been shown to be a risk factor, but there is in fact no guaranteed health benefits associated with losing weight (Wright 2009). Another characteristic of the operation is that it seems to ameliorate type 2 diabetes overnight in most cases (Christou 2006). This remission of diabetes cannot be ascribed to weight loss, but to a combination of decreased food intake and changes in gut hormones as result of the bypassed intestine (Rubino *et al.* 2010). Patients cannot expect to attain normal weight, and there is also a risk of re-gaining weight after a few years (cf. Magro *et al.* 2008).

Furthermore, the procedure is irreversible and has both social and personal consequences. Making the stomach smaller solves the problem of eating too much at the level of ‘mechanics’, so to speak – ‘fullness’ here is understood as a consequence of physical registration of fullness in the stomach – but limiting the physical capacity of the stomach does not address other concerns or motivations, which, according to patients’ experiences, will make them eat. Hunger is often described and dealt with as a merely biological drive, although we are well aware that there is much more involved in ‘wanting to eat’ than securing and satisfying physiological needs. In a social reality characterised by an abundance of food, hunger relates to many other social and normative arenas as well.

Methodology

This article builds on empirical findings from ethnographic fieldwork undertaken by the first two authors among persons undergoing gastric bypass surgery in 2010 and 2012 in Denmark.

Participant observation was carried out at a major public hospital,⁴ in settings such as information meetings, dietetic counselling meetings, clinical trials and examinations. Interviews were conducted

with 32 persons going through surgery (both pre- and post-operatively). Most patients were interviewed in their homes. Additionally, we participated in a few meetings of the local Gastric Bypass Association in Copenhagen, which took place in the private homes of members. The Gastric Bypass Association organises voluntary support groups for people who have had surgery, or who are awaiting or considering treatment.

The majority of our informants were women employed as unskilled workers in the health care sector or in similar service industries. Our male informants typically worked in public transport or manufacturing companies. There are four times more women than men undergoing this operation, which points to a gendered normativity in the way bodies are perceived and regulated ⁵. The questions guiding the fieldwork were how patients use or relate to instructions on how to eat, and how they experienced food and eating after the operation. In order to obtain insight into the longer-term experience of living with gastric bypass, we also included interviews with patients who had undergone surgery one to two years previously, which proved critical in determining how the analysis developed around the themes of eating, bodily change and sense of self. Doing fieldwork in a clinical setting with a vulnerable group of people was challenging. But the intimacy of interviewing and passing time together gave patients an opportunity to voice their concerns in ways that many called a relief. We interviewed each informant twice and were able to let the conversation develop and to explore themes that arose.

Before surgery: the dietician's advice

The dieticians at the hospital help patients deal with changes in eating patterns. At a hospital information meeting, Line met Fred, who let her accompany him to his first meeting with the dietician. Fred weighed 147 kg, and the dietician started out by telling him he needed to lose 12 kg before surgery. "It sounds impossible," Fred replied, explaining that he had never lost more than 10

kg. Since giving up smoking three years ago, his weight had only gone up, he said, whistling and pointing his finger to the ceiling. Then they began to talk about his diet, asking how many meals he would eat on an average day. The dietician quickly concluded, “This all sounds quite sensible. Maybe we should discuss quantity?” But the dietician then changed the subject to vegetables: “What about vegetables? Are you getting any of those?” To which Fred replied, “I like vegetables. Yes, we’re having them. My wife is not up to much, but I like them.” Then, moving on to the subject of fat, they discussed Fred’s breakfast. He prefers yoghurt with a fat content of 3.5%. The dietician declared this too fatty: “We recommend 0.1%,” she said. Fred was resigned: “Not much spark in that.” She asked a last question, “How about exercise?” Fred just shook his head. Time ran out and the meeting was over, and shaking Fred’s hand the dietician said, “It’s difficult. The operation alone will not do the job. One’s psyche has to be up to it as well.” What stands out in this particular clinical encounter is how Fred’s lived experience of eating was not explored, but instead became circumscribed by the dietician’s focus on nutritional information about the number of meals, the quantity of foods, vegetables, fat and finally exercise. And moreover at the very end of the meeting she introduced more psychological issues like motivation. At a meeting a week later preparing the patients for the operation, we saw something similar. Here the dieticians presented some basic dietary guidelines. But while weighing bodies, counting calories, and defining nutrients were central practices in the weekly meetings, when giving instructions, dieticians also talked about sensing one’s self and one’s body. Consider the following quotes from the weekly meetings:

Dietician: The portion sizes are going to be very small compared to what you are used to. Let your eyes get used to the meal – eat slowly and cut the food in tiny bits. Use a smaller plate, a dessert plate...Keep your focus on the food. If you eat with all your senses, you will feel more full.

Dietician: Promise me: Eat dark chocolate! It's something that tastes really good and has a fuller flavour. It will bombard your taste buds. It will fill up your mouth, and you will find yourself only able to eat a small piece.

In the work of dietitians, a cultural understanding of 'the eater' and 'the body' surface in the clinical encounter. Learning through counselling is a social process, and as new eating skills are learned, so too are the social values within which the skill is practiced (cf. Lave and Wenger 1991). The question is whether the normative, or cultural, level in the dietitians' work resonates with how each patient practices his or her eating. Fred had tried to go on diets before. During his short meeting with the dietitian, Fred's daily practical ways of handling food and eating were not addressed. Fred told Line that he had worked as a carpenter for many years, but that several years ago he had been retrained as a bus driver. His occupation had therefore changed from one requiring physical labour to one that was more sedentary. His wife was a health care assistant. They both worked variable hours, so sharing meals was not something they would do on an average day. Asked about the dietitian's tip to eat dark chocolate, Fred said he was not interested. He never could stand the taste of dark chocolate.

The value of feeling perfectly satisfied by a nibble of dark chocolate, or of underlining the importance of sensing, are examples of specific ways of dealing with eating that recall values and trends linked to mindful eating and the Slow Food Movement, which appear to have spread to new areas like dietetic counselling (Vogel and Mol 2014). It is clear that in the dialogue between dietitians and patients, standard medical guidelines were communicated. These dealt with weighing bodies, measuring calories and defining nutrients. But in their seemingly more intuitive conversation around food and eating, as they reference either psychological motivation or ways of using the senses to direct or develop one's eating, dietitians express an understanding of food and

eating that relates to their own personal preferences. This suggests that the values expressed by the dieticians are linked as much to issues of class and gender as they are to the relevant professional guidelines, and as we have seen, they did not apply to Fred.

It has been observed that professionals may draw on several rationalities of treatment or care (Mol 2008) that interact or fuse in practice; although their intentions are good, they do not necessarily lead to the right outcomes. Some patients, like Fred, are not that familiar with counting calories, and others have always done it. In the faces of the audience members listening to the dietician, there was doubt, frustration and raised eyebrows; at the information meetings where patients were told by dieticians to always eat proteins first to ensure a high nutritional value, the patients joked that it sounded like their favourite diet. The patients learn from dieticians to work with 'healthier' strategies of eating, but the different strategies formulated by the dieticians show how eating is not explored in terms of patients' lived experience. Patients are advised to eat foods like whole grains and dark chocolate, which are conceptualised as having an effect on the way hunger or fullness is experienced. The patients work on using their senses, developing a taste for specific foods, and replacing quantity with quality or taste as a recommended way of managing hunger; the latter can be seen in the example of managing a 'sweet tooth' with dark chocolate. But eating dark chocolate or whole grains will not necessarily have the effect the dietician has in mind on someone like Fred. Thus there are multiple modes of hunger and fullness in play among both the patients and the dieticians; this was humorously illustrated by the patients' joke about protein, which also points to the different cultural norms embedded in eating. The dieticians' promotion of a healthy diet and the individual eating experiences of both patients and dieticians intersect, and diverse ways of eating are negotiated. In the following, the diet induced by the surgical procedure adds yet another layer to the diversity in eating.

After Surgery: new stomach - new sensations

When patients receive a gastric bypass, their experience of hunger and fullness changes. The altered stomach and intestine are supposed to produce a particular experience of fullness and hunger, which is often dependent upon the person being able to keep the body 'balanced': neither too hungry nor too full. Either extreme will cause problems for most patients. *Clogging* or *dumping* syndrome are biomedical terms for the unpleasant sensory phenomena associated with the experience of eating after the operation; they relate to the new ways patients will have to deal with hunger and fullness (Colquitt *et al.* 2009). Eating too much, or eating certain foods, will make them sick. On an experiential level, the operation has changed their bodies in one direction, but the patients may not find themselves changing in the same direction. Thus uncertainty arises when patients interpret signals from the body. Consider how John describes what fullness means to him:

It's very physical. I'm not able to stuff anything into my stomach. But it's not the kind of fullness I had before the operation. That's gone. Maybe there is some kind of valve in the belly, like in a toilet, where it moves up and closes the water off when it's full, which hasn't been replaced properly. Maybe I've lost that kind of valve, or it's in a different place – higher up in my throat? I have to sense in a new way, feel differently in a way. It's more like a visual kind of fullness. I don't have a sense of physical fullness anymore, so it's more like – I have to look at what I will eat and say okay, that's what I'll eat and no more. My body is still saying I am hungry...it's not up here it says I'm hungry. It's not in the head, it's not psychological... it's physical. I cannot feel full when I'm full. (John, 3 months after surgery)

The experience of fullness changes in almost all the patients. John's example clearly shows how the fullness he experiences as a result of the treatment is different from his prior embodied memory of fullness. His use of new metaphors, with descriptions of valves and associations with plumbing and drainage, are telling of the estrangement he is experiencing from his own body. For others it was the opposite – namely, the ability to feel hunger – which was given new expression by the operation, as in this quote from Miriam:

Normally, I would never be hungry in the middle of the day, but I went to the local mall with my mother, and then I asked her, should we go for a salad? I never say such a thing. Normally, I eat when I get back home. Something must have happened, because I was hungry at that point and felt that I should have something to eat. I haven't had that kind of feeling before. And it's a good feeling, to get hungry... and now you're going to eat. But I'm also a bit afraid to gain weight if I eat, but that's wrong, right? I must eat to lose weight. (Miriam, 2 months after surgery)

Miriam's reflections show how she experiences a change in the way she feels hunger. This points to the way eating, or feeling hungry, has become something of which she is suddenly 'allowed' to be conscious. The paradoxical way she relates to the idea that she must now eat in order to lose weight makes her dwell on her usual pattern, which was trying refrain from eating all day, which resulted in eating too much when she had her meal. Both examples point to ways in which the operation spurs new or altered sensations in the body. After undergoing the operation, patients are obliged to be very conscious of what they eat, and this is new to many of them. They receive a 5-week schedule that guides them back to eating 'normal' (i.e. solid) food again. Nine daily meals are indicated in the first two weeks after surgery, followed by a standard of six meals a day. On the

advice of the hospital, all gastric bypass patients learn to eat very slowly, to chew many times, and to endure lots and lots of food preparation time and very long meals. Through this process, they start questioning themselves: Is this right, the feeling I have now? Is something wrong, or is this just a new feeling I have? Consider the following quote from Karen about how she experienced eating after surgery:

I remember having a plate of hot soup. It really hurt, my stomach was aching. I felt really bad, and you start thinking, is this how it's going to be from now on? This isn't me! I was terribly hungry, and I wasn't used to feeling hungry. It made me feel sad. I couldn't handle it, it drove me insane. When you're having a nice time, you want something to put in your mouth... what could I have instead? Food has controlled my life. I need to have something else to think about. It might even be worse now, because you don't get the same pleasure out of it. I am missing something ... because I can almost say food has been my life, I mean: What are we going to do over the weekend, what will we be cooking?

Karen summed up by saying, "Now everything is about food, and I am not used to this. Before, it was instinctive – I'll just make something and it tastes good" (Karen, 18 months after the operation). Karen's juxtaposition of the idea that "food has controlled my life" and the notion that "now everything is about food, and I'm not used to it" is striking. It is clear that she experiences a dramatic change related to how she handles her eating. The role of food has changed. Now, she is forced to be conscious of when and what she eats, when she is not eating, and when she feels the urge to eat. Before, she did not experience hunger the way she does now. Experiencing hunger now evokes sadness in her, insanity even. Before, hunger was about reacting to a craving: she made

something and it tasted good, as she says. She mentioned buttered toast as an example of something that would make her eat; hence a craving for a certain food can be, we suggest, what determines, or is experienced as, the ‘right’ kind of hunger. Karen continues to talk about herself as a host, a role she is fond of. What Karen’s story underlines is how profoundly eating relates to a person’s sense of self, and how changes around eating might develop into disruptions not only in the way she experiences her body, but also in the way she relates to herself and acts in the world. This is something we shall return to shortly.

After surgery: experimenting with eating again

After the operation, the patients still deal with their former eating habits, and some try to get in touch with what, for them, food used to be about. Some, like Karen, seek specific experiences in their bodies. The experience of eating things like “buttered toast”, “coke with ice”, “rib eye steak”, “bread with cheese and jam” is mentioned by some of the patients as key to how they produce and experience hunger and fullness. Tangible qualities of food, such as the sparkling coolness of a liquid, are not easily forgotten and could be what instantiates satisfaction. When Line came to visit, Anne offered her tea and biscuits. She commented on the biscuits, saying that she had bought them for Line, and she joked about her flat: “You won’t find anything (sweets and that sort of thing) in this house. You would think it belonged to a slim woman in her fifties.” She spoke ironically of herself, saying: “It’s the same when I’m strolling around with my wicker basket in the supermarket, like the gourmets, only it isn’t all the healthy stuff I put down there. It’s still all the unhealthy stuff.” Surely Anne was well aware of how ‘the right’ habits are followed. She has what she terms “drawer food” in the kitchen, like popcorn, dark chocolate and nuts – small snacks to prevent herself from eating more unhealthy stuff – but in the end she would never eat it. Some begin to follow the dieticians’ advice about using the senses to replace quantity with quality or taste.

Miriam, for example, spoke about her supermarket budget: she described how she now chooses to buy better-quality products, and enjoys new experiences like squeezing an organic lemon, appreciating the smell and freshness of the fruit. One couple described the alteration in their eating preferences as follows: “Before, we would go for an ‘all you can eat’ kind of place, now it’s homemade sushi.” John, meanwhile, talked about having “begun to eat properly” – that is, “chew extra and think,” as he summed it up. Most of the patients develop new eating practices and habits out of need, but nevertheless, the slow tempi, the tiny meals, and the focus on every bite are challenging. Cutting food into the tiniest bits was strange, and left them with the feeling of actually not sensing the food in the mouth. Some felt it was like “*chewing air*” and had developed the practice of putting down their cutlery between each bite as a way of prolonging the meal and of avoiding having nothing to chew on too soon, both in terms of eating socially with others and in terms of time (according to dieticians, a meal ought to last around 30 minutes).

Given how many of the patients had formerly focused on quantity (“Ad libitum is my favourite dish,” as one patient said with a grin), these new practices seem to be a paradoxical caricature of the *right* kind of eating. Still others mentioned that they found it hard to substitute their earlier food products with ‘light’ products because of the taste. They would prefer instead to stop eating things like jam. They found the sugar-free versions sour, and were similarly put off by light mayonnaise. They were left with the impression of not having made proper food: “Not doing it right, not the way it is supposed to be,” as one said. As a consequence, many patients stick to eating just a few food items. At the same time as patients were trying new things, they were also enacting practices by which they tried to hold on to earlier habits. John developed his own way of dealing with the fact that he could no longer eat beef: something you could call sham eating, a practice of “eating without eating,” as he put it:

Certain kinds of beef, like entrecote or rib-eye steak, are too entangled. I chew it, but I don't swallow it. I chew and I taste and then I put it away. Then I will have another bite. Then I will have eaten, in a way – tasted it, that is. If you can't eat it and you can't swallow it, then at least you can chew it, get the taste of it and then just take it out of your mouth again and go for another piece. You will end up with a cutlet all chewed to pieces... I wouldn't do it if we were out. I eat without really eating it.

In our analysis of the above, we find that the patients' practices bear a resemblance to mimicry. Mimicry is a practice of close imitation characterised by 'likeness' between the imitator and the imitated (Taussig 1992). From this perspective, one might suggest that through their practices, patients connect to new eating practices by mimetically representing them. Thus, Anne could be said to be experimenting with adapting to a healthy lifestyle by strolling with her wicker shopping basket, which she understands to be an iconic image of 'the gourmet' – that is, a person with the 'right' kind of eating habits. A mimetic strategy might be a helpful path to pursue, but when those who take this path do so unsuccessfully, we suggest this is because the new practices are unable to fulfil the eater's needs. John still hungered for rib-eye steak, and not being able to change that, mimicked 'normal' eating through his 'sham-eating' practice. Sham eating is an example of what might be termed 'mimetic eating'. One might also argue that eating 'light' products, as patients are advised by their dieticians, could be considered mimetic eating. Here, for example, what Fred considers "real" yoghurt is substituted by a reduced-fat product, yielding a type of mimetic eating he rejects. These types of mimetic eating are 'mechanical' in nature. By 'mechanical', we mean that their tool-like characteristics (e.g. reduced fat content) are foregrounded at the expense of emotive associations, memories, sensory pleasure, and so on. This tendency is also observed in Gracia-Arnaiz's article on eating disorders, in which she questions the paradoxical way in which those

obsessed with eating are advised by counsellors to control their eating even further (2009: 201). In our material, we see that patients' eating often remains mimetic, because it is not embedded in their lived experience of eating in a meaningful way. One might further suggest that the mechanistic approaches applied by the patients resemble the logic of the intervention practices that they encounter at the hospital, in terms of both the actual operation and the approach to food proposed by the dieticians. It is evident that the patients do not learn healthy eating habits as part of the intervention process. Instead, they find themselves caught between their old eating patterns and not-yet-embodied new practices. It is also interesting how tasting, as opposed to eating, gains importance for the patients, which indicates the close relationship between eating, the materiality of the food and the senses, a relationship, which turns taste into an embodied "[...] act; sitting and listening, feeling, tasting, touching. This 'doing' engages the body entering into contact with a material and having an impression that is difficult to qualify" (for an elaboration on this distinction see Hennion 2005: 676). In what follows, it is not only uncertainty about the usefulness of the instructions, but also uncertainty about the taste of food after the operation that plays a significant role.

Uncertain tastes: beyond stomach sensibilities

I really had trouble understanding why I don't like the things I stuff in my mouth, things I ought to be pleased about. For more than a month, I'd been looking forward to eating normal stuff, and then I actually didn't like it. It felt strange. Now I have to taste everything, because my taste buds have really changed enormously. I can't count on anything. (Jane, 4 months after surgery)

After the operation, patients react to their food in often-unexpected ways. Taste change following gastric bypass is recognised biomedically as an adverse side effect of the surgery. Some patients experience dramatic food aversions, or changes in tastes and preferences, but so far a clear cause of this phenomenon has not been established (Benson-Davies *et al.* 2008). In conversation, the doctors at the hospital said that taste change is experienced by approximately two-thirds of patients. In spite of this, this theme was not incorporated as topic in itself at the hospital meetings, but was mentioned instead along with other side effects of the operation. In Jane's case, it seemed quite clear that she was choosing food she used to like, and that she then found out through experimentation that foods that used to give her pleasure are no longer agreeable. Many of the patients feel disgust when confronted with certain foods. For some, this can be foods they used to like, and for others, it can be a whole group of foods: salty, sweet, fatty, and so forth. The patients experience uncertainty when they discover that their taste for things has changed: they experience anxiety (fright, even) about doing something wrong, but also a more existential anxiety as new sensitivities are activated. Disgust has been described as "a sentiment that unites physical experience with emotional force and moral evaluation" (Durham 2011: 133). In anthropological scholarship on dietary taboos and transgressions, food and consumption play important roles in establishing social order and physical and social boundaries. Disgusting objects are often those that violate boundaries (Douglas 1966). Following that line of thinking, disgust might be understood as something related to social rupture. Thus disgust is not only linked to 'boundaries of the self', but 'extends beyond the self' (ibid: 144). In a recent study, Mol uses the example of patients who have been tube-fed. She finds that the patients experience a lack of taste. Mol argues that in the case of eating despite sickness, it is possible to come back to eating because taste "can be made to have a function." We as eaters have an attachment to tasting and to the pleasures of taste, and therein lie taste's therapeutic possibilities (Mol 2011: 9). The idea we propose to extract from Mol's analysis

is that of ‘attachment’ to taste, and thus the ‘drive’ to taste (in one’s usual way). The way that uncertainty unfolds in patients’ eating practices relates, we suggest, to a similar drive to taste – which, coming back to Seremetakis, has to be viewed as something related in complex ways to the interconnectedness of modes-of-being and modes-of-sensing. When they express uncertainty in eating, patients are experiencing what we suggest should be understood as a lack of both former sensory practices and of specific foods they used to cherish. In that respect, the patients become (to use a term developed by Seremetakis) ‘sensory-displaced’ (Seremetakis 1994: 3). As a consequence, the experience of uncertainty when enculturating new dietary practices, ruptures their own (indigenous) modes of sensory investment and reception (ibid: 134).

Changes in Jane’s reaction to food were not only negative. Jane described an occasion when she was helping her son move into his new flat, and orange juice was the only drink he had available. She had never liked it, but all of a sudden found herself “crazy about it.” At this point, we may recall Jane’s earlier remark about not being able to count on anything, suggesting that her uncertainty relates to more than mere foodstuffs. Consider Jane’s explanation of how she can no longer drink Coke:

I have had one-and-a-half litres of soft drink every day for about 28 years. Now, I just I don’t like it. It was the first thing I struggled with. They said you can’t drink soft drinks after you have had this operation because of the gas. My husband shook it and made it flat, and it tasted awful. I had really been looking forward to my Coke, and still I imagine the feeling of having a good glass the way I like it, with Coke and lots of ice. Every time I think, ooh wouldn’t it be good if I liked it, but I’ve lost the taste for it. (Jane, operated on 4 months ago)

“Foods are distinct from other objects that people may use to derive comfort,” writes Locher about comfort foods. This is because foods are ‘incorporated’, and thus have both physical and emotional effects (2005: 275). The new uncertainty in the way a person deals with food and eating thus becomes an issue of personal integrity and identity. Returning to Leder, and to the experience of ‘dys-appearance’, we find in Jane’s case that the sensory displacement is a displacement away from herself. With the surgery done, she lost what one might call ‘bodily access’ to herself, as she was no longer able to act upon cravings which used to be a familiar signal from her body; hence her way of caring for herself is obstructed.

Eating and being

Changing the way we eat also changes who we are in our fundamentally embodied experience. The body becomes an *object* when the patients experience changes in their ways of eating. What is perhaps more surprising is that the body appears as a *subject*. The body suddenly acts on its own, producing new sensations, such as sudden fullness or aversion to once-cherished food. In that sense, the body acts unaccountably, almost like an actor with its own will. Experiences like this can, for some, result in uncertainty and in the feeling that the body is different. The person affected in this way may say things like, ‘I’m not myself,’ or ‘My body doesn’t want what I want’. We find that ruptures in a person’s way of eating are closely connected to ruptures in a person’s sense of self, and ruptures on the level of the patient’s personal eating seem to spill over to the social realm and have important consequences for the social lives of these patients. These patients will not come to eat more normally (if such normality exists). Despite the surgery, they are still moving around the periphery of meals. They prepare special meals to eat in parallel with family meals, or they tend to eat before or after. One of the women had a private day-care service, where she had worked for 31 years. This was meant to be something she would do while her son was little, but it continued. She

reasons that her overweight developed because she was always cooking and caring for the children. But it struck us that she said she never shared a meal with the children. It was not until they had left her home at 3:00 PM that she would eat. The same was true when she left the house: she would not eat for a whole day when out shopping. Upon returning, late in the afternoon, she would eat. We met her again later, and she felt energetic: “I lost my joy in eating, but it doesn’t matter because I have so much more in my life now,” she said, telling me how she had started to redecorate her kitchen. But she herself did not eat in her new kitchen, as she had stopped taking ordinary meals and no longer ate together with the family. She still enjoyed watching the family eat, however. This paradox suggests that her eating has changed even more after the surgery. Before, she did not eat when at work or out, but now her pleasure in food was also displaced – to the kitchen décor, or to watching the rest of family eat. Not only was she ‘sensory-displaced’ and therefore unable to pursue her usual eating habits and pleasures, but her sensory displacement had also turned into a social displacement.

Conclusion

In a Western society whose social reality is characterised by an abundance of food, feelings of hunger and fullness relate to many other social, normative arenas. Focusing on eating and dietary change in practice as this study has done helps situate phenomena like hunger and fullness and requires us to look beyond the idea that these are merely natural needs. When we ground peoples’ changing sense of themselves in their everyday sensory experience, we find that eating and the range of sense-making practices related to eating are embodied modes of presence and engagement in the world. Gastric bypass surgery alters the body in ways that force patients to change their eating habits. This alteration produces new sensory experiences that cause not only displacement from patients’ sense of self, but also ruptures in their social life. Though many of the patients have

attempted to diet periodically for most of their lives, and therefore tend to eat very differently from the rest of their families, the patients did not feel that their dieting had affected their families in the same way as the surgery. They cherished their role as food providers and enjoyed eating with their family, and would always prioritise a hot meal with the family. After the operation, some lost the joy of eating, or had bouts of nausea or other side effects, and some found it difficult to hold on to their usual routines. Post-operatively, patients lost a lot of weight, but they also find their lives have changed in ways they were not prepared for. What we want to highlight are the consequences of this sensory displacement for patients. Although doctors and dieticians facilitate treatment to overcome obesity – a condition that causes patients to suffer – the consequences of treatment are complicated. The patients hoped to attain ‘normality’, and health personnel shared this objective, but as we have shown, the process entails unforeseen existential uncertainty. When patients tried to change their eating, we find that they developed ‘mimetic eating’ practices: that is, they adopted practices they associate with healthy eating, such as keeping healthy snacks like popcorn in a drawer. Mimicry is part of most social learning as a first step to acquire new competences (Lave and Wenger 1991), but some gastric bypass patients seem stuck in their mimetic practices. Tangible and sensory qualities of food are crucial in these respects, and are part of the reason that popcorn is not interchangeable with buttered toast. Foodstuffs like those in the drawer and the ways of eating that are recommended to patients are neither the right kind of satisfaction nor are they the true object of their hunger. Furthermore, gastric bypass patients’ ways of handling and expressing the uncertainty that arose from these changes are analysable as expressions of the moralities involved in changing and adjusting their subjective experience of eating. The adoption of ‘healthy eating’ that the patients encounter at the hospital might potentially be analysed as a ‘politics of the senses’ (Farquhar 2002: 89pp). The radical changes in the patients’ former modes of sensing, along with the new sensations themselves, do not allow patients to access their bodies the way they used to.

However disturbing these changes may be to patients, they are naturalised in the hospital setting and thus not questioned.

Acknowledgements

This research was funded by the research program of the UNIK: Food, Fitness & Pharma for Health and Disease (see www.foodfitnesspharma.ku.dk). The UNIK project is supported by the Danish Ministry of Science, Technology and Innovation for which we are very grateful. Particular thanks go to Gry Skrædderdal Jakobsen for making helpful comments on an earlier draft of this article. We would also like to thank the anonymous reviewers and the journal editors for their helpful and constructive comments.

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¹ BMI or body mass index expresses weight (in kilograms) divided by the square of height (in meters) in adults. WHO (2000) classified weight according to the following BMI categories: BMI >18.5-24 is the healthy range; 25-29.9 is overweight; and BMI > 30 is obese. BMI > 35 with obesity-related diseases and BMI > 40 are classified as severely obese.

² The 8% weight loss is not a standard biomedical requirement. In the Danish case, the argument is that weight loss has an effect on the patient's liver size and will help to reduce the risk of complications.

³ Figures from the Danish newspaper *Børsen*. Over the same period, operation costs increased from 23 million DKK in 2005 to 206 million DKK in 2011 (*Børsen* 19.8.2011).

⁴ As a result of the interdisciplinary character of the research group, which included medical doctors from the endocrinology unit, we had ready access to the hospital and its patients.

⁵ Sociologist Karen Throsby calls obesity 'woman's work'. She found that women are held responsible not only for their own overweight but also the overweight of husbands and children (See Throsby 2012).